



MIAMI-DADE COUNTY, FLORIDA FUTURE SOLICITATION DRAFT

TITLE:

**CRYOGENIC OXYGEN PLANT MAINTENANCE
AND TECH SUPPORT**

FOR INFORMATION CONTACT:

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MINIMUM REQUIREMENT AND REQUIRED SUBMITTALS:

Bidders must meet the minimum qualifications as stipulated herein. The County may, at its sole discretion and in its best interest, allow the Bidder (s) to provide the required documents during the bid evaluation period. Failure to provide the required documentation as specified by the County will result in the Bidder (s) proposal not being considered for contract award.

- 1) Bidder shall be regularly engaged in providing the services requested in this solicitation for a minimum of one year. Bidder must provide two commercial or government customer references as proof of experience. The references listed must be customers for whom the Bidder has provided the services described in this solicitation prior to the bid opening date.
- 2) Bidder must have a minimum of three employees available to perform these services with experience providing at least one of the three technical support services at cryogenic oxygen plants (Refer to Section 3, Paragraph 3.____). Bidder must provide resumes for each of the three employees, which shall demonstrate employees have the requisite experience and are qualified to provide service for the existing oxygen generation facilities.
- 3) One of the three employees listed by the Bidder shall be designated as a Field Engineer and must have five (5) years specific experience in Union Carbide cryogenic systems. Such experience must be clearly stipulated in the resume as required above.

SCOPE OF WORK

The work scope consists of providing technical support including Field Engineer to assist Water and Sewer Department (WASD) forces in start-up operations, upgrading of existing equipment, maintenance, and emergency repairs of the Cryogenic Oxygen Plants at the WASD Wastewater Treatment Plants in Miami-Dade County, Florida. The work also consists of furnishing all necessary labor, parts, materials and equipment that WASD might need to meet operational requirements for scheduled maintenance and repairs.

WASD operates three (3) treatment plants in Miami-Dade County that process and treat wastewater (a combination of liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions together with any groundwater, surface water, and storm water that may be present). Located at these three (3) wastewater treatment plants are nine (9) oxygen plants, which produce oxygen at a high purity level which is used in the wastewater treatment process.

The oxygen is used in the oxygenation reactor tanks to provide for the bacterial respiration requirements so that the process of treating and stabilizing the raw wastewater influent to wastewater treatment areas of a plant can be accomplished. This activity enables a larger volume of wastewater to be processed and disposed of in a shorter period of time than using ambient air. The production of oxygen is therefore critical to the wastewater treatment process and directly affects the associated costs and volume of wastewater processed by the plants.

GENERAL SUPPORT STAFF:

Support staff provided by selected Bidder must have experience and fully capable of providing services to cryogenic oxygen production facilities in the following areas:

- 1) Support services at plants with a minimum 50-ton/day capacity that have reversing heat exchanger (RHX) based front-end design.
- 2) Warm plant thaw startup and facility maintenance services including insulation removal and cold end check valve replacement.
- 3) Installation, programming, troubleshooting and operation of programmable logic control (PLC) systems. This experience is to include GE Fanuc 90-30 CPU's with iFix software communicating via Ethernet IP

FIELD ENGINEER:

The Field Engineer shall become knowledgeable on the County's facilities and treatment plant operations and will be the day-to-day point of contact. The Field Engineer must be able to shut down and start up Union Carbide cryogenic plants without assistance from the County's personnel.

EQUIPMENT DESCRIPTION AND SITE LOCATIONS

The locations and description of the sites and equipment are as follows:

- North District Wastewater Treatment Plant
2575 NE 151 Street, North Miami Beach, FL 33160

The cryogenic oxygen equipment at the North District Wastewater Treatment Plant consists of: two (2) Union Carbide Model U63 cryogenic oxygen plants with three 1250 HP Joy Compressors, Rotoflow expansion turbines, one 300-ton and one 140-ton liquid oxygen storage tank and vaporizing facility, related process equipment, and electronic instrumentation and controls. In addition, at the North District Oxygen Plant #3, the cryogenic oxygen equipment consists of one (1) Union Carbide Model U100 cryogenic oxygen plant with two (2) Joy Compressors, one (1) 1500 HP and one (1) 1750 HP motor and Rotoflow expansion turbine.

- Central District Wastewater Treatment Plant
3989 Rickenbacker Causeway, Virginia Key, Miami, FL 33149

The cryogenic oxygen equipment at the Central District Plant consists of: three Union Carbide Model U80 cryogenic oxygen plants (two on-duty and one stand-by) with three 1500 HP Joy Compressors, Rotoflow expansion turbines, four 71.5-ton liquid oxygen storage and vaporizing facilities, related process equipment, and electronic instrumentation and controls.

- South District Wastewater Treatment Plant
8950 SW 232 Street, Goulds, FL 33170

The cryogenic oxygen equipment at the South District Plant consists of: two Union Carbide Model U80 cryogenic oxygen plants with two 1500 HP Centac Compressors, and one Union Carbide Model U100 plant with one 1750 HP Joy Compressor, Rotoflow expansion turbines, Four 71.5-ton liquid oxygen storage tanks and vaporizing facilities, related process equipment, and electronic instrumentation and controls.

SERVICE REQUIRED

A. Technical Support

Under the control and guidance of the Oxygen Plant Supervisor, or designee, the selected Bidder shall consult with and render assistance to WASD on special problems of operations and maintenance which may be encountered from time-to-time. This work shall include, but not be limited to providing assistance at the job site or by telephone, on equipment or system operation, personnel training, reviewing maintenance status, troubleshooting problems, overhaul procedures, recommending equipment or system upgrading, review of operating data, parts and maintenance planning and conducting audit of the facilities if requested by WASD. Annual thaws and startups of plants shall be provided along with 90 day CEGT operating thaws on U100's.

B. Upgrade Equipment, Parts and Materials

Any upgrade of equipment, parts and materials for the scheduled maintenance and emergency repairs will usually be supplied by WASD. In the event WASD cannot provide the materials, the selected Bidder may be requested to furnish the items as directed by the Oxygen Plant Supervisor or designee. In these circumstances Project Work Orders would be utilized and issued by the user department as deemed necessary.

EMERGENCY SERVICE

The selected Bidder shall provide 24 hours, 7 days a week Emergency Service to the County under the contract. Emergency service response time shall be within twenty-four (24) hours after notification by the County, unless otherwise mutually agreed in writing via a work order.

The selected Bidder must provide contact information for the Filed Engineer that will be available to the County after normal working hours, weekends, and holidays to provide telephone technical support and/or schedule field service visits in the event of a County operational emergency at these designated plants.

PROJECT WORK ORDER AUTHORIZATION

WASD's authorized representative shall generate and issue a Work Order for each project to be performed under this Contract. The Work Order shall include the location, description and plans, if necessary, covering the scope of work to be completed. The Work Order shall include a cost estimate calculated by the County for the work listed on the Work Order. The estimate must be based on the prices submitted by the Bidder for this solicitation.

For the purposes of identification and payment, the Work Order shall be numbered and dated. The selected Bidder shall supply WASD's authorized representative with a written price quotation within a time frame specified by WASD. The selected Bidder shall start the work within 30 days of notification by the Oxygen Plant Supervisor or designee.

- A. Emergency work may be initiated verbally by the WASD Oxygen Plant Supervisor, or designee, but will be followed up with written requests before any work is performed on plant site.
- B. The Oxygen Plant Supervisor, or designee, shall approve all upgrades, repairs and overhaul work and shall be the final authority for implementing selected Bidder's recommendations.
- C. The Oxygen Plant Supervisor, or designee, shall in all cases have the final decision on determining or accepting the amount, quality, fitness of materials or equipment to be provided by selected Bidder.

WASD shall make a conscientious effort to anticipate the Contractor's work or travel requirements and give the Selected Bidder sufficient notice to schedule and perform approved plant work. However, if an emergency is declared by the WASD, the selected Bidder shall have Field Service Engineer available at the plant site within twenty-four (24) hours of such notification in accordance with Section ____ Emergency Services.

No work shall be performed without authorization issuance of a Work Order as approved by the Oxygen Plant Supervisor, or designee. All work shall be performed under complete supervision of the Oxygen Plant Supervisor, or designee,